

CLAIMS

I claim:

1. A method for accessing hardware I/O control
5 blocks, which are stored in an hardware I/O control
block array, by a parallel SCSI host adapter, said
method comprising:

10 addressing one page in a plurality of pages
of said hardware I/O control block array for said
parallel SCSI host adapter using a first portion
of a hardware I/O control block array pointer in
said parallel SCSI host adapter wherein said one
page includes a plurality of storage sites for
hardware I/O control blocks; and

15 addressing a hardware I/O control block
stored in said one page using a second portion of
said hardware I/O control block array pointer in
said parallel SCSI host adapter.

20 2. The method of Claim 1 wherein said addressing
a hardware I/O control block stored in said one page
further comprises:

25 using a tag supplied by a reconnecting SCSI
target as said second portion.

3. The method of Claim 1 further comprising:

storing a reconnecting target address by said
parallel SCSI host adapter.

30 4. The method of Claim 3 further comprising:
comparing a target address stored in said
hardware I/O control block with said reconnecting
target address.

35 5. The method of Claim 4 further comprising:

using said hardware I/O control block upon said target address and said reconnecting target address being equal.

5 6. The method of Claim 4 further comprising:
 changing said first portion of said hardware I/O control block array pointer upon said target address and said reconnecting target address being unequal.

10 7. The method of Claim 6 further comprising:
 addressing another page in said plurality of pages of said hardware I/O control block array for said parallel SCSI host adapter using said first portion of said hardware I/O control block array pointer in said parallel SCSI host adapter wherein said another page includes a plurality of storage sites for hardware I/O control blocks.

15 8. The method of Claim 7 further comprising:
 addressing a hardware I/O control block stored in said another page using said second portion of said hardware I/O control block array pointer in said parallel SCSI host adapter.

20 9. The method of Claim 8 further comprising:
 comparing a target address stored in said hardware I/O control block stored in said another page with said reconnecting target address.

25 30 10. The method of Claim 9 further comprising:
 using said hardware I/O control block stored in said another page upon said target address stored in said hardware I/O control block stored in said another page and said reconnecting target address being equal.

11. A method for accessing hardware I/O control blocks, which are stored in a hardware I/O control block array, by a parallel SCSI host adapter, said
5 method comprising:

storing hardware I/O control blocks for targets on a SCSI bus in a paged hardware I/O control block array; and

10 accessing one hardware I/O control block in said paged hardware I/O control block array addressed by a hardware I/O control block array pointer, wherein said hardware I/O control block array pointer includes a page identifier and a storage site identifier.

15 12. The method of Claim 11 wherein a first portion of said paged hardware I/O control block array pointer includes a page identifier, and said method further comprises:

20 configuring said page identifier to identify a page in said paged hardware I/O control block array so that said paged hardware I/O control block array pointer addresses one hardware I/O control block page in said array.

25 13. The method of Claim 12 further comprising:
loading a tag from a reconnecting target into said storage site identifier of said paged hardware I/O control block array pointer.

30 14. The method of Claim 13 further comprising:
comparing a target address stored in said one hardware I/O control block with an address of said reconnecting target.

35 15. The method of Claim 14 further comprising:

using said hardware I/O control block upon said target address and said address of said reconnecting target being equal.

5 16. A system comprising:
 a parallel SCSI host adapter comprising;
 a sequencer; and
 a paged hardware I/O control block array
 pointer coupled to said sequencer; and
10 a memory coupled to said paged hardware I/O
 control block array pointer, and including a paged
 hardware I/O control block array comprising:
 a plurality of pages going from a lowest
 page to a highest page, wherein each of said
15 plurality of pages further comprises:
 a plurality of hardware I/O control
 block storage sites, wherein a number of
 said hardware I/O control block storage
 sites in said plurality of hardware I/O
 control block storage sites on at least
 one of said plurality of pages is equal
 to a number of unique tag values that
 can be returned by a tagged queue SCSI
 target reconnecting to said parallel
 SCSI host adapter.

17. The system of Claim 16 wherein said memory is external to said parallel SCSI host adapter.

30 18. The system of Claim 16 wherein said memory is internal to said parallel SCSI host adapter.

35 19. A memory comprising:
 an expanded SCSI control block array for a
 parallel SCSI host adapter, said expanded SCSI
 control block array comprising:

a plurality of pages going from a lowest page to a highest page, wherein each page further comprises:

5 a plurality of SCSI control block storage sites,

10 wherein a number of SCSI control block storage sites in said plurality of SCSI control block storage sites on at least one of said plurality of pages is equal to a number of unique tag values that can be returned by a tagged queue SCSI target reconnecting to said parallel SCSI host adapter.

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